

-25-

ABSTRACT OF THE DISCLOSURE

A method for determining the location coordinates of a mobile terminal with respect to reference elements adapted to send toward the mobile terminal radioelectric signals involves the steps of measuring the radioelectric signals to derive respective measurements, the measurements being affected by measurement errors, and subjecting the measurements to state-based statistical filtering, such as, a Kalman filtering, to derive therefrom the location coordinates of the mobile terminal. At least some of the reference elements are terrestrial reference elements and in the statistical filtering at least one further state is included in addition to the coordinates. The further state is representative of the measurement errors. The terminal is adapted to be mounted on a vehicle, such as, a motorcar, and to have associated therewith a measurement source, such as, an altimeter adapted to provide additional measurements indicative of the location, e.g., the altitude, and/or the displacement of the mobile terminal.